

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A bone-marrow extraction and/or injection device (1) comprising:

· a grip zone-(2); and

· a needle (10)-presenting at least one side orifice-(15);

~~the device being characterized in that wherein~~ said needle (10) is fastened onto a needle holder-(30), and ~~in that~~ a protective sleeve (20)-surrounds at least part of said needle-(10), said protective sleeve being mounted to move relative to said needle (10)-between a closed position of said at least one side orifice (15)-and an open position of said at least one side orifice-(15), and said needle holder-(30) including reception means (34)-that are suitable for co-operating with fastener means (22)-of said protective sleeve (20)-so as to hold said protective sleeve in the closed position or in the open position.

2. (currently amended): A device (1)-according to claim 1, in which said protective sleeve-(20) is mounted to turn about the needle-(10).

3. (currently amended): A device (1)-according to claim 1, in which said protective sleeve (20) includes at least one side opening (25)-that is positioned substantially facing said at least one side orifice (15)-of the needle (10)-in the open position.

4. (currently amended): A device (1) according to claim 4, in which said protective sleeve (20) comprises a first portion constituting a sheath (21) surrounding said needle, and a second portion comprising said fastener means (22).

5. (currently amended): A device (1) according to claim 4, in which said fastener means (22) include at least one claw that is pivotally mounted, and that presents a manual actuation surface (23) and a projection (24).

6. (currently amended): A device (1) according to claim 4, in which said reception means (34) of said needle holder (30) comprise at least one groove that is suitable for receiving at least one projection (24) of said fastener means (22) of said protective sleeve (20).

7. (currently amended): A device (1) according to claim 1, in which said device includes a mixing chamber (13) that is connected to said needle, and to at least one inlet channel (31) and at least one outlet channel (32).

8. (currently amended): A device (1) according to claim 7, in which said mixing chamber is provided in the needle holder (30).

9. (currently amended): A device (1) according to claim 7, in which said grip zone (2) comprises a handle, said mixing chamber being provided in said handle.

10. (currently amended): A device according to claim 7, including an add-on element (130) between said grip zone (2) and said needle holder (30), said mixing chamber being provided in said add-on element (130).

11. (currently amended): A bone-marrow extraction system, characterized in that it includes a device (1) according to claim 1.

12. (currently amended): An extraction system according to claim 11, in which said system includes a mixing chamber (13) that is connected to said needle (10) of the device, and to at least one inlet channel (31) and at least one outlet channel (32).

13. (currently amended): An extraction system according to claim 11, in which an inlet channel (31) is connected to a source (40) of anticoagulant.

14. (currently amended): An extraction system according to claim 11, in which an outlet channel (32) is connected to a bone-marrow collection vessel (50).

15. (currently amended): An extraction system according to claim 11, in which said system includes suction means connected at least to said needle (10).

16. (currently amended): An extraction system according to claim 15, in which said suction means (60) comprise a vacuum pump.

17. (currently amended): An extraction system according to claim 15, in which said suction means ~~(60)~~ are controlled by a control means ~~(90)~~, such as comprising a pedal that is actuated by the user.

18. (currently amended): An extraction system according to claim ~~11~~ 12, in which said at least one inlet channel ~~(31)~~ projects into the mixing chamber ~~(13)~~ and towards said at least one outlet channel ~~(32)~~, so as to create a Venturi effect.

19. (currently amended): An extraction system according to claim 11, in which said system includes a timer device ~~(80)~~ for setting the duration of the bone-marrow suction stages.

20. (currently amended): A bone-marrow injection system, characterized in that it includes a device ~~(1)~~ according to claim 1.

21. (currently amended): An injection system according to claim 20, in which said device ~~(1)~~ is connected to a bone-marrow reservoir, said reservoir being connected to dispenser means.

22. (currently amended): An injection system according to claim 20, in which said dispenser means comprise a pump, such as comprising a syringe with an electrically-driven plunger, or a CO₂ pump.

23. (previously presented): An extraction and/or injection system according to claim 11, in which said system is packaged in sterile manner.

24. (new): A bone-marrow extraction and/or injection device according to claim 1, wherein the fastener means comprises a pair of claws disposed diametrically opposite to one another.

25. (new): A bone marrow extraction and/or injection device according to claim 24, wherein the fastener means prevents a radial force from being applied to the protective sheath.

26. (new): A bone-marrow extraction and/or injection device (1)-comprising:

- a grip zone; and
- a needle presenting at least one side orifice;

wherein said needle is fastened onto a needle holder, and a protective sleeve surrounds at least part of said needle, said protective sleeve being mounted to move relative to said needle between a closed position of said at least one side orifice and an open position of said at least one side orifice, and said needle holder including grooves which co-operate with a fastener of said protective sleeve so as to hold said protective sleeve in the closed position or in the open position.